

# Notice of Allowability

Application No.

09/866,533

Examiner

William P. Fletcher III

Applicant(s)

MIRKIN ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment and response filed 3/9/2004.
2. ☒ The allowed claim(s) is/are 89-116, 118-130, 133-156, 158-185, 187-199, 202-215, 217, 219-288 and 290.
3. ☒ The drawings filed on 09 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

WPF 5/14/2004  
William Phillip Fletcher III  
Patent Examiner, USPTO  
Group Art Unit 1762

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment and response to the Office action mailed 12/1/2003, filed 3/9/2004, is acknowledged. Claims 89-130, 133-156, 158-199, 202-215, 217, and 219-290 are pending.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with J. Steven Rutt (Reg. No. 40,153) on 5/24/2004.

The application has been amended as follows:

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Claim 90. (Currently Amended) A direct-write nanolithographic method comprising:  
providing a solid substrate;  
providing an atomic force microscope tip having a patterning compound coated thereon; and

delivering the patterning compound from the tip to the substrate so as to produce a stable pattern on the solid substrate~~[[The method according to claim 88]]~~, wherein the delivery step is carried out with flow of the patterning compound from the tip to the substrate by capillary action, and wherein the patterning compound has a chemical affinity for the substrate.

Claim 117. (Cancelled)

Claim 159. (Currently Amended) A direct-write nanolithographic method comprising:  
providing a solid substrate;  
providing a tip having an ink thereon; and  
delivering the ink from the tip to the substrate so as to produce a stable nanostructure on the solid substrate~~[[The method according to claim 157]]~~, wherein the delivering step is carried out with flow of the ink from the tip to the substrate by capillary action, and wherein the ink has a chemical affinity for the substrate.

Claim 186. (Cancelled)

Claim 289. (Cancelled)

Claim 290. (Currently Amended) A direct-write nanolithographic method comprising:  
providing a solid silicon substrate ~~[[comprising silicon]]~~;  
providing a tip having an ink thereon; and  
delivering the ink from the tip to the substrate so as to produce a stable nanostructure on the solid substrate.

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3. Claims 89-116, 118-130, 133-156, 158-185, 187-199, 202-215, 217, 219-288, and 290 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The closest prior art, Jaschke and Mirkin, was cited in the Office action mailed 12/1/2003. Applicant's argument, set-forth in the response filed 3/9/2004, that the water deposited by Mirkin does not have a chemical affinity for the substrate is persuasive. The examiner has reviewed the definition of chemical affinity provided by applicant and it is clear that, because the water patterns deposited by Mirkin evaporate (see page 6867, 2<sup>nd</sup> column), water does not have a chemical affinity for the substrate according to the ordinary, art-recognized meaning of the term. Consequently, Mirkin does not read on claims reciting this feature. Additionally, upon further review of applicant's disclosure, it is the examiner's position that one of ordinary skill in the art would not have viewed the patterning compound/ink as being the same as the transport medium. Consequently, Mirkin does not read on the claims reciting this feature. New claims 219-288 and 290, recite subject matter indicated allowable for the reasons set-forth in the Office action mailed 12/1/2003.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*WPF 5/24/2014*  
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